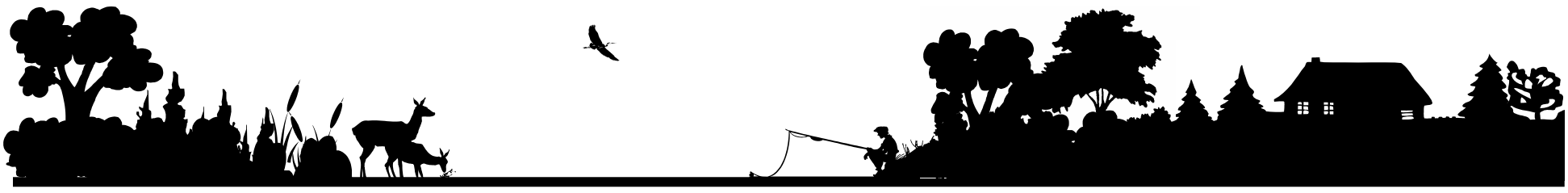


Northwoods Journal – August 2009

A Free Publication About Enjoying and Protecting Marinette County's Outdoor Life

In This Issue:

A Stroll through the Harmony Prairie

Ever wonder what kinds of flowers live in the prairies and grasslands of Wisconsin? Come join Marinette County staff on a guided hike through the Harmony Arboretum prairie on Thursday, August 6 from 6:30-8:00 p.m. to learn more about our native prairie ecosystems and the plants and animals that live there. This is a free public program. For more information, see the Harmony Arboretum Calendar on page 8 or call the Land & Water Conservation office at 715-732-7780. Harmony Arboretum is located 7 miles west of Marinette, ½ mile south of State Highway 64 on County Road E.

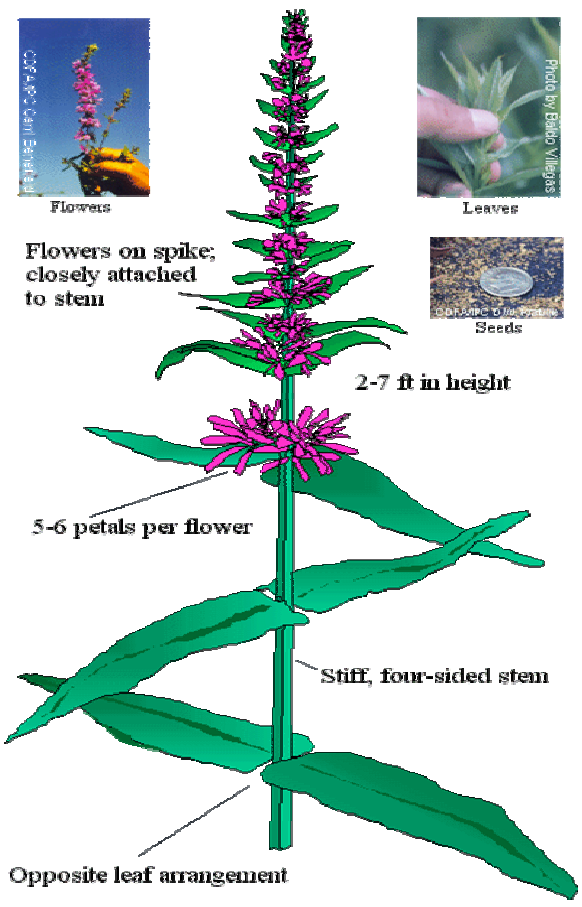
Wetland Invaders! Purple Loosestrife and Common Reed (*Phragmites)*

By Robert Ruleau, Aquatic Invasive Species Coordinator

Innocent-looking, colorful, feathery flower heads are a deceiving cover for two of the most invasive plants currently disturbing Wisconsin wetland and shoreline habitats. Purple loosestrife (*Lythrum salicaria)* and common reed (*Phragmites australis)* are the proverbial "bad seeds" that are causing fits among land managers and property owners alike. Although the two plants are causing similar damage to our wetlands and shorelines, they have different histories, methods of invasion, impact, and ultimately require different techniques on how we can control or manage those invasions and impacts. Wetlands and shorelines have tremendous ecological, economic and recreational values to us in Wisconsin. So it is important, as with all invasive species, to try and prevent their spread and reduce the harm they are causing to those values we cherish.

Purple Loosestrife

Found in all of Wisconsin's 72 counties, this invasive plant species is actually an herb that was introduced from Europe in the 1800s as a garden perennial because of its exotic purple and magenta flowers. Later on, ballast soil in ships also transported seeds to North America from the plants' native range in Europe. Purple loosestrife prefers to grow and spread rapidly in wet areas including wetlands, waterways, shorelines and roadsides, but can also grow in drier soils. It grows to a relatively tall, dense and bushy 3-7 feet with distinct purple flowers blooming from July to September.



Purple loosestrife has a few highly invasive characteristics that have contributed to its success in spreading; due to its aggressiveness, purple loosestrife has been known to swiftly take over a wetland habitat and crowd out native plants and displace native wetland animals. And once established, a mature plant can produce up to 3 million seeds per year, highly increasing its chances of invasion.

Caroline Savage, St. Lawrence Centre

Established populations of purple loosestrife are difficult to control and eradicate, but there are some techniques that have reduced their abundance and allowed for wetland habitats to regain a healthy diversity of native plants and animals. If there is a small patch of loosestrife, it can be dug up by hand and left to dry out in the sun. Although controversial among many, herbicide application has been used to kill it as well. The problem with herbicide treatment is the chemicals used are non-selective, meaning treatment will kill most of the plants in the area, including native (and beneficial) species.

One extremely successful method to remove loosestrife has been biological control. *Galerucella* beetles have been released to attack and control purple loosestrife in Wisconsin since 1994. Once released on the plants, the beetles are very efficient at feeding on developing stems and leaves of purple loosestrife which often prevents flowering. The only downside currently with *Galerucella* beetles is the time required to rear them, and large populations are needed in order to make an impact on purple loosestrife plants in Wisconsin. Learning to properly identify purple loosestrife is important, considering there are many beneficial native plants that look very similar to this exotic invasive. Please contact Marinette County Land and Water Conservation Division (LWCD) if you think you have identified purple loosestrife or other invasives in the county.

Common Reed (*Phragmites*)

Phragmites is essentially purple loosestrife's taller, uglier and *more invasive* cousin. A relatively new invader in Wisconsin, this non-native grass with bamboo-like stems that can reach heights of 10-15 feet has been rapidly spreading in wetlands and

Continued on page 3

Donating Produce to Food Pantries

By Scott Reuss, Marinette County UW-Extension Agriculture & Horticulture Agent

As we approach full-speed into fruit and vegetable season, most of us start wondering about what to do if everything gets ripe all at once, or how many pickings of green beans we can eat, freeze, or can before we don't want to look at them anymore. Whether you have extra fruits and vegetables because you are a typical gardener that planted too much, or because of timing issues or other reasons, please consider donating any extra produce to one of your local food pantries.

Most area food distribution points are able to accept home gardeners or farm-grown fruits and vegetables, although many of them have specific days for delivery, due to lack of storage. The list below is current and accurate for all the Marinette County entities. If in doubt, call prior to delivering your produce.

Wherever it is that you are going to take extra produce, please remember to practice good harvesting, sorting, and cleaning principles so that your donations will be able to be used to their highest potential. The following general steps will lead to the highest quality and best nutrition value remaining in fruits and vegetables for your own use or to be donated.

- *Pick produce just prior to, or at, proper harvest stage for the species you are harvesting.* A complete listing of hints on proper staging can be found in the UWEX publication "Harvesting Vegetables from the Home Garden", available at http://learningstore.uwex.edu, or get a copy from Linda or Scott at the office. Immature fruits or vegetables will not have full flavor, nor will they have full vitamin content. Over-mature produce will not store very well, and become wasted material (i.e. compost).

- *Harvest produce as soon as possible prior to dropping it off.* Many fruits and vegetables decrease in quality or flavor fairly quickly post-harvest if not stored properly. And, as mentioned, many food pantries do not have enough cold storage to store produce, so try to drop it off on the days that they are able to distribute it.

- *Prepare and select produce as you would your own.* Wash off extra soil, and air-dry or towel dry so that extra water is not present. Clipping off long, thin roots from root crops makes transport and washing simpler. Leaving unusable portions of leafy vegetables in your own compost pile is better than bringing them along and possibly ending up in the trash. If produce is diseased or insect-ridden, consider simply composting it, or at least only taking the better portions.

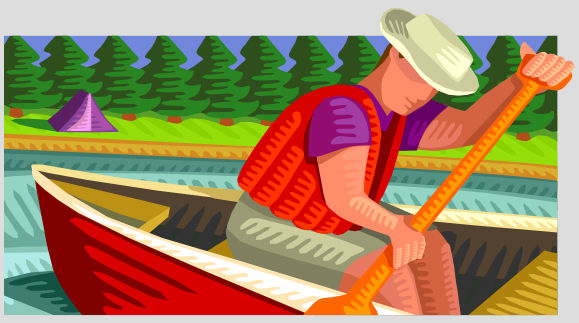
- *If in doubt about something, call the center and double-check.*

Lastly, if you have any questions regarding vegetable/fruit production or any other horticultural issue, contact Scott or Linda at the Marinette County UW-Extension office, 715-732-7510 or e-mail scott.reuss@ces.uwex.edu.

Marinette County Food Pantries

(name, location, hours for drop-off, phone #)

- **Newcap**, 801 Wells St., Marinette; M-F, 8a-3:30p (prefer a.m.), 732-7141
- **St. Vincent DePaul**, 1619 Main, Marinette M-F, 9a-5p (prefer MWF 9-noon), 735-6955
- **Salvation Army** – 80 Russell St., Marinette 735-7448 (call ahead & make sure it's open
- **Crivitz Area** – 806 Fritzie Ave., Crivitz; 1st & 3rd Wed. each month, 9-10 a.m., 854-2222
- **Amberg Area** – W15053 Grant St., Amberg 1st & 3rd Tues. or Wed. a.m., 927-2079
- **Peshtigo Area** – 240 McCagg St., Peshtigo every Wed., 8:30 to 10 a.m. , 582-3494
- **Niagara Area** – St. Anthony's Catholic Church, Niagara; every other Mon. (7/13, 7/27, etc.), 251-3879
- **WIC Crivitz –** St. Mary's Catholic Church, Crivitz; July 21, Aug 18, Sept 15 1- 4p.m.
- **WIC Niagara** – Niagara Senior Center, 1st Tues. each month, 9-11:30a.m. & 1-3:30p.m.
- **WIC Marinette** – Dept. of Human Services, 2500 Hall Ave., 1st two Thurs. each month



Peshtigo River Trail Paddle Trip

Saturday, September 12th

10:00 a.m. – 3:00 p.m.

Come join us on a free guided paddle trip on the Lower Peshtigo River from the City of Peshtigo landing to the County Rd. BB landing. Bring your own canoe/kayak or use one of our canoes (limited supply of 6 canoes – *call to reserve a canoe starting August 26 at 9am*). Youth under 18 must be accompanied by an adult, and you must provide your own snacks, water, etc. This is a free public event. To register, reserve a canoe, or for more information about the event, please call the Land & Water Conservation office at 715-732-7780.

Smokey Bear Celebrates his 65th Birthday, Reminding Americans that *"Only You Can Prevent Forest Fires."*

By Jolene Ackerman, Wisconsin DNR

Since his "birth" on August 9, 1944, Smokey Bear has been a recognized symbol of conservation and protection of America's forests. His message about wildfire prevention has helped to reduce the number of acres burned annually by wildfires, from about 22 million (1944) to an average of 7 million today. However, wildfire prevention remains one of the most critical environmental issues affecting our country. Many Americans believe that lightning starts most wildfires. *In fact, on average, 9 out of 10 wildfires nationwide are caused by people.*

In Wisconsin, the two most frequent causes of wildfire are debris burning and equipment, although there are spikes in other causes during certain times of the year. We experience more power line-caused fires on windy days and more fireworks-caused fires in summer. Spring is the season when the weather is most conducive to wildfire starts and spreads. The dead, dry above-ground vegetation that was last year's leaves, flowers, grass and foodstuffs is prime for ignition until the danger of frost has passed and new green growth has emerged fully. The warm, dry, breezy days that we yearn for in spring are also the days most conducive for fires.

Mid-June usually draws a close to spring fire season. Weather patterns this time of year are generally favorable for full green-up of previously dormant vegetation. The higher moisture-holding capacity of green plants and regular rains greatly reduce the likelihood of wildfire starts and spreads. This year, however, fire season lingers as wildfires continue to burn in northern Wisconsin. People are urged to be cautious with anything that can start a wildfire, such as equipment, debris burning, campfires, ash disposal, fireworks, and smoking.

Check out this link for more information on fire danger and the forest fire program: http://dnr.wi.gov/forestry/Fire/Fire_Danger/WisBurn/StateCounties.asp.

Wetland Invaders, continued from page 1

especially newly exposed coastal areas throughout the state. It spreads mainly by vegetative reproduction through rhizome extension, budding and runners, creating a root system up to 6 feet deep, and stolons that can run 50 feet horizontally. This mechanism of spread allows a few individual plants to quickly form the thick and monotypic stands that are all too common in an increasing number of wetland habitats.

Like purple loosestrife, *Phragmites* is an extremely aggressive plant that forms nearly impenetrable, thick stands while outcompeting beneficial native plants and displacing wildlife. *It has been observed to outcompete and displace purple loosestrife in some habitats.* Along shorelines, property owners often express concern with blocked views of the water because of the high percentage (95% or more) mono-stands of the invasive grass that took over after water levels in Lake Michigan dropped some years ago. Newly exposed lakebed is prime habitat for these invasives. Because of the density of the stands, *Phragmites* also poses a serious wildfire threat to properties near them.

Control measures to combat *Phragmites* are dependent on the location and growth density of the plants. Ideally, the invasive should be controlled as soon as it is identified when the population is small. This can be done by hand using a weed whacker, machete or anything that will chop down the stems. If left unchecked, *Phragmites* populations will explode and invade most available habitat. Once this happens, control measures to eradicate large stands become very costly in terms of time and resources. Eradication often involves use of mechanical equipment for mowing and application of herbicide treatment. Frequent mowing (using a motorized vehicle) may help to keep populations in check, but requires a permit. There has been success with the use of aquatic herbicides to control and kill *Phragmites*, and a permit is required if you use this technique.

Northwoods Journal Online

Would you like to read current issues of the *Northwoods Journal* online? Go to www.marinettecounty.com and click on the link at the bottom of the page. We can even send you an e-mail reminder when each new issue is posted on our website. Please contact Anne Warren at awarren@marinettecounty.com or call 715-732-7784 for more information.

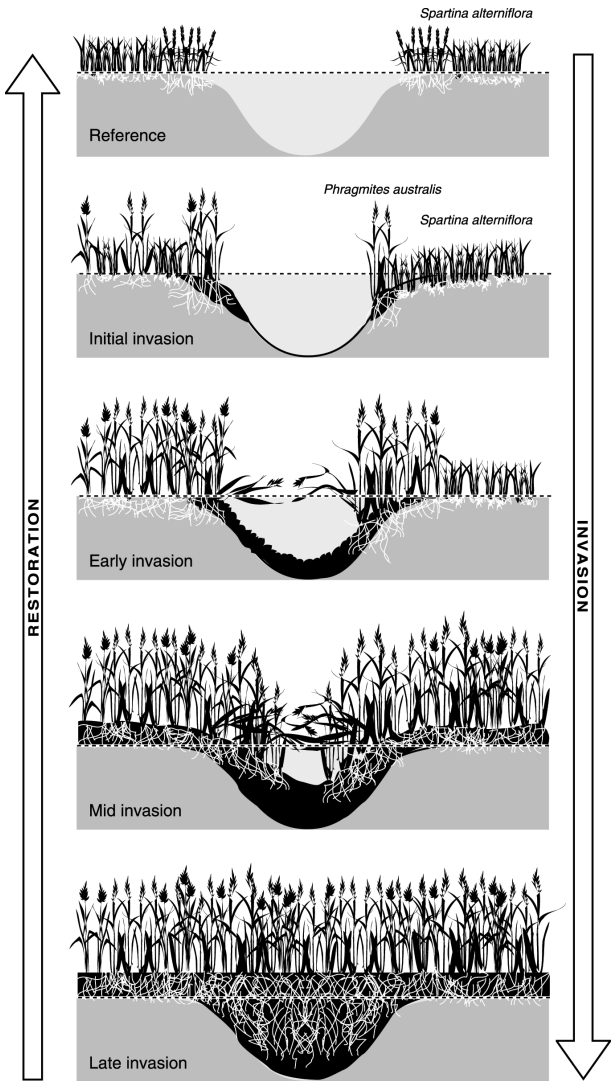


Illustration of Phragmites invasion over time

A combination of cutting and herbicide application has been observed to be the most effective control method to eradicate it from an area. It is important to note that whatever method is used for control, a multiple year follow-up is usually necessary because *Phragmites* is quite resilient and will re-grow if allowed.

If you would like to learn more about these and other aquatic invasive species impacting Marinette County and how to control them, visit www.marinettecounty.com (home page → Departments → Land Information → Aquatic Invasive Species) or contact Robert Ruleau at 715-732-7642.

Other resources for learning more about these invasive species include:

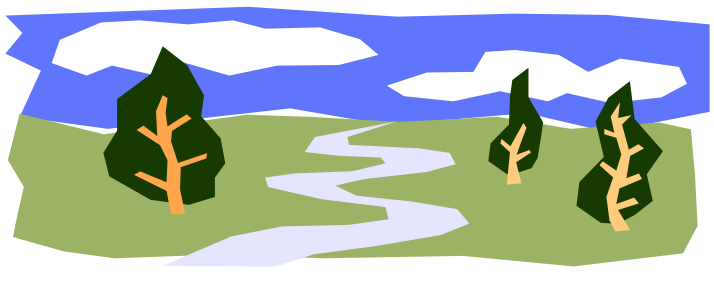
- ✔ http://dnr.wi.gov/invasives/ - WI DNR
- ✔ http://invasivespecies.wi.gov – Wisconsin Council on Invasive Species
- ✔ http://www.seagrant.wisc.edu/ais/ - UW Sea Grant Institute
- ✔ http://www.ipaw.org/ - Invasive Plants of Wisconsin Association
- ✔ http://dnr.wi.gov/invasives/publications/manual/manual_TOC.htm - WI DNR – WI Manual of Control Recommendations for Ecologically Invasive Plants
- ✔ http://nas.er.usgs.gov/ - US Geological Survey Non-indigenous species program

Common Reed, Phragmites australis

A Fun Activity for Everyone - The "Unnatural Trail"

Do you need something different to do when going on a hike or other outdoor excursions with your children? This activity is a fun way to incorporate hiking and concepts such as adaptation, camouflage, and how people affect the natural environment. It also helps focus attention and helps improve children's observation skills. This activity is appropriate for children ages 5 and up (and it's fun for adults too!).

Props Needed: 10 or more man-made objects (ex. frisbees, light bulbs, soda cans, balloons, brightly-colored rubber toys, hangers, etc.). Some should stand out; others should blend in with the surroundings. This activity can be done in semi-wooded areas, thickets, brush, school forests, backyards, parks, school grounds, etc. as long as there is adequate cover for the unnatural objects.



Set up: Before your hike, place the man-made objects along a certain area of the path you plan to take. You can place some above head height, on the ground, in bushes or trees, etc. After you are all set up, lead your group to the head of the trail or area and explain that there may be some unusual objects along the trail, but to keep their observations to themselves – they can count how many objects they see, or you can have them write it down. Then walk the trail, and stay quiet, as the children look for objects. *They should not tell others where the objects are or pick them up*. Another adult at the end of the trail/area can have children whisper how many objects they have seen. If time permits, they can go back to look again. Wrap-up discussion should include what objects were easiest and hardest to see and why. Can the children think of any animals or plants that are colored or shaped similarly to help them blend in or not? You can also discuss how people affect natural areas by littering, and have the children help you collect the objects afterwards. This activity was adapted from the book *Sharing Nature with Children* by Joseph Cornell (1998).

On the Lakefront – Toxic Algae in Lakes

By Chuck Druckrey, Water Resource Specialist

These days it seems every time you turn on the news you find out something you like is bad for you… but swimming? Really? If you have been listening to the news, or reading the paper you may have noticed some warnings about "toxic algae". It turns out that some types of algae can produce toxins that can sicken, or in extreme cases, kill people or animals. So do we have to stay out of the lakes now? Fortunately no, if you know what to look for you can avoid toxic algae and continue to enjoy our lakes and streams.

First, not all algae produce toxins. The culprit is *cyanobacteria*, a type of photosynthetic bacteria commonly called blue-green algae. Many blue-green algae control their buoyancy and float on the surface of the water where they form a thick scum. Many are also colonial, forming long strands or jello-like clumps in the water. During heavy blue-green algae blooms, the water will often look like pea soup or bright green paint. Some of these algae produce toxins that affect the liver or nervous system. Under the right conditions, the level of toxins can become elevated and pose a health concern.

The key here is "under the right conditions". Studies show that blue-green algae produce toxins when the population is extremely high. Algae abundance is typically described by measuring the amount of chlorophyll in a water sample. In a Minnesota study, the risk of algal toxins in a lake remained low until chlorophyll levels climbed above 30 micrograms per liter (ug/l). At this level the water would be very green and water clarity would be very poor. Chlorophyll levels above 30 ug/l indicate serious water quality problems brought on by excessive nutrients. Fortunately, these conditions are rare in Marinette County lakes. Man-made ponds fed by nutrient rich runoff are much more likely to see severe blue-green algae blooms.

According to the Wisconsin Department of Health Services, symptoms of poisoning from algal toxins include vomiting, diarrhea, muscle cramps, paralysis, or respiratory difficulties. The symptoms can occur from a few hours to days after ingesting water with toxic algae blooms. Even if no water is ingested, symptoms can occur from skin contact including rashes and eye, nose & throat irritation.

So how is one to know if toxic algae are a problem in your favorite swimming hole? Measuring chlorophyll concentration is not feasible since conditions can change in the lake before the lab results even come back. Luckily it's pretty easy to avoid toxic algae and keep you and your pets safe. If the water looks too nasty to swim in stay out! According to a study of Minnesota lakes harmful levels of algal toxins were most often seen in near-shore areas with pea soup green water and a heavy surface scum. Often the water had a strong odor of decay. Not too inviting! This probably explains why so few adults get sick from toxic algae. Children and pets, on the other hand, are more susceptible, probably because they are less likely to be deterred by green scummy water.

If you do come in contact with blue-green algae blooms, wash thoroughly. Pets should also be rinsed off so they don't ingest algal toxins while grooming themselves. If you think you or your pets are sick from blue-green algae call a doctor or veterinarian immediately.

For more information on blue-green algae blooms, visit the following links:

- ✔ http://dnr.wi.gov/lakes/bluegreenalgae/ Wisconsin DNR information page
- ✔ http://dnr.wi.gov/org/water/wm/wqs/bgafaq.pdf - WI DNR publication
- ✔ http://dhs.wisconsin.gov/eh/bluegreenalgae/ - WI Dept. of Health Services
- ✔ http://www.glerl.noaa.gov/res/Centers/HumanHealth/docs/habs.pdf - National Oceanic & Atmospheric Administration (NOAA) algae bloom fact sheet

County Landfill & Area Recycling Information

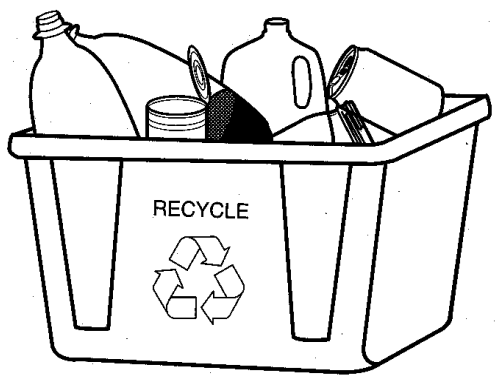
MAR-OCO County Landfill

(Marinette and Oconto Counties)
N7785 Shaffer Road, 5 miles west of Crivitz off of County Rd. A
(715) 854-7530

2009 Hours
Monday-Friday, 8 a.m. – 4 p.m.
1st & 3rd Saturdays, April – October
8 a.m. – 12 p.m.
Closed all other Saturdays, Sundays & holidays

Yard waste, any liquid waste and recyclable items are not accepted.

For more information, visit online at www.marinettecounty.com



Recycling Centers

Town of Stephenson
Twin Bridge site, County X
Tuesday, Saturday, Sunday
9 a.m. – 4 p.m.

Crivitz site, August Street
Wednesday and Saturday
9 a.m. – 4 p.m.

Newspaper, cardboard, magazines, glass bottles and jars, tin cans, aluminum, plastic containers (1 & 2), used motor oil, car batteries, scrap metal & yard waste accepted. For more information visit online at http://www.stephensonwisc.com/.

Town of Peshtigo
W1945 Old Peshtigo Road
2nd, 4th, 5th Saturdays each month
8:30 a.m. – 12:30 p.m.
1st, 3rd, 5th Wednesdays each month
12:30 p.m. – 4:30 p.m.

We accept tires, appliances and air conditioners with Freon, stoves, microwaves, washers, dryers, any kind of metal (no motor vehicles), televisions, automotive oil (no cooking oil or antifreeze), paper, cardboard, plastic, glass, aluminum, tin, batteries, bagged garbage and yard waste. No paint or hazardous materials. Some fees may apply - http://townofpeshtigo.org/Recycling.htm.

Township of Athelstane
(715) 856-6428
Wednesday, 12:00 – 4p.m.
Saturday, 12:00 – 4p.m.
Sunday, 8a.m.– 4p.m.

Cans, cardboard, brown & clear glass, magazines, paper, plastic #1 & #2, and drain oil accepted; no building materials or paint. Some yard waste accepted. Fees may apply for furniture & appliances. For more information visit: http://athelstanewi.com/recycle.htm.

CRITTERS WE LOVE TO HATE: MOSQUITOES

By Andrea Duca, Conservation Intern

Mosquitoes have been around for 100 million years, and in that time they have diversified into over 2,500 species that are very different from one another. About 170 species occur in the United States and there are more than 50 mosquito species living in Wisconsin. The name "mosquito" comes from the Spanish word *mosca*, meaning "little fly". Mosquitoes are insects from the family *Culicidae*, although there are many different genus and species of mosquitoes. Four main mosquito genus groups are:

Aedes mosquitoes are painful and persistent biters, attacking only during daylight hours. They don't enter dwellings, and prefer to bite mammals like humans. *Aedes* mosquitoes are strong fliers and are known to fly many miles from their breeding sources.

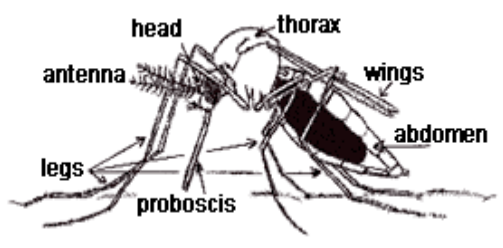
Culex mosquitoes are painful and persistent biters also, and prefer to attack at dusk and after dark, and readily enter dwellings for blood meals. Domestic and wild birds are preferred over humans, cows, and horses. *Culex tarsalis* is known to transmit encephalitis (sleeping sickness) to people and horses. *Culex* are generally weak fliers and do not move far from home, although they have been known to fly up to two miles. They usually live only a few weeks during the warm summer months. Females emerge in late summer to search for sheltered areas where they "hibernate" until spring. Warm weather brings them out in search of water where they can lay eggs.

Culiseta mosquitoes are moderately aggressive biters, attacking in the evening hours or in shade during the day.

Anopheles mosquitoes are the only mosquitoes that transmit malaria to humans, and do not reside in Wisconsin.

What's for Dinner?

Insects and other invertebrates attack people for two reasons: to obtain food or to defend themselves. Blackflies, ticks, mosquitoes, chiggers, deer and horse flies require animal or human blood as food. Mosquitoes have a specially adapted "sucker" called a *proboscis* used to get blood for food and egg production.



Mosquito adults also feed on flower nectar, juices, and decaying matter; however, all female mosquitoes, who live for three to six weeks, require a blood meal to breed. They use the protein from blood to make eggs and can take multiple blood meals during this time. However, mosquitoes in turn are food for many other creatures - birds, bats, amphibians, wasps, spiders, and dragonflies are all examples of mosquito predators.

Who to Bite?

Mosquitoes are attracted by carbon dioxide (CO_2) in our breath. They can detect this from great distances. In the arrangement of their compound eyes, blind spots separate each eye from the next one. As a result, mosquitoes can't see you until they are 30 feet away. Even then, they have trouble distinguishing you from any object of similar size and shape: a tree stump, 55-gallon drum, etc. When they are 10 feet away they use extremely sensitive thermal receptors on the tip of their antennae to locate blood near the surface of the skin. The range of these receptors increases three times in high humidity. When the female mosquito gets close, she makes her final choice. If two people are outside together, one will almost always get most of the attention, as some people's sweat is more preferred over others, and mosquitoes are usually more attracted to women than men. They also seem to be most attracted to dark colors like brown, gray, and blue, so wearing light-colored clothing may help deter them.

Why Does it Itch?

Once the proboscis breaks through the epidermis (the uppermost skin layer), the mosquito uses it to search for a blood vessel in the dermal layer underneath. When it locates a vessel, the mosquito releases some of its saliva into the wound, which contains an anti-coagulant that keeps your blood flowing until it is finished with its meal. Your immune system realizes something is going on and histamine is produced to combat the foreign substance (the mosquito's saliva). The histamine reaches the area under attack, causing blood vessels there to swell - it's the action of the histamine that causes the red bump. What about the itching? When the blood vessels expand, the swelling irritates nerves in the area. You feel this irritation as an itchy sensation.

West Nile Virus & Malaria

Two well-known illnesses transmitted by mosquitoes are West Nile Virus (WNV) and Malaria. WNV has been found in parts

Continued next page

Where in Marinette County?

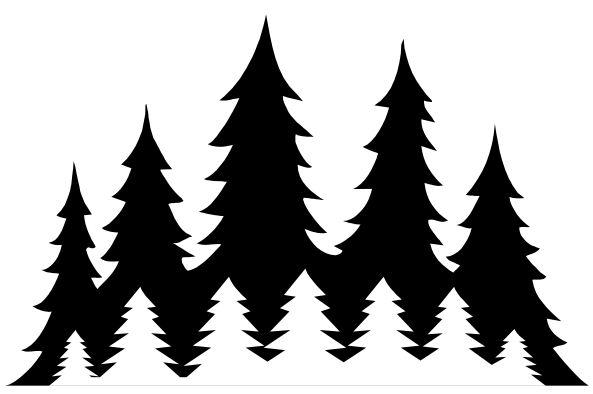
Tell us where this photo was taken and you could win a prize!

To enter, send a note including your name, address, and phone number or email awarren@marinettecounty.com. Any interesting facts about the subject are also welcome. Correct answers will be entered in a drawing for a $20 gift card from Wal-Mart. ***Please respond by August 17, 2009 to be entered in the drawing.***

Unfortunately, nobody guessed the picture from June's "Where in Marinette County" contest! The picture below was taken from the highest point in Marinette County, at the Thunder Mountain County Park located north of County Rd. W off of Caldron Falls Road. It offers hiking, picnicking, good photo opportunities, and is a great place to just enjoy nature.

Thanks to everyone participating, and good luck with this month's photo!

Rural Landowners' Conference in September

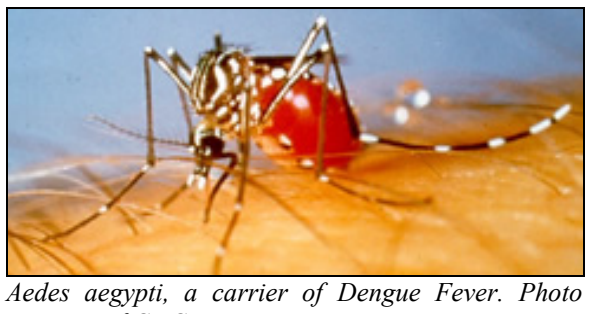


At Crivitz High School on Saturday, September 19

Topics will include forest pests, native plants, legal issues for landowners, agriculture/horticulture opportunities, restoring native areas, attracting wildlife, and other issues. For more information, please contact Scott Reuss at the Marinette County UW-Extension office at 715-732-7510, or e-mail him at scott.reuss@ces.uwex.edu.

Mosquitoes, continued from page 5

of Asia, Eastern Europe, Africa and the Middle East. The virus was first detected in the United States in 1999 in New York City and has since spread through most of the country. Most infected people and animals only experience mild illness or no symptoms, but in rare cases can become seriously ill. 80 percent of people who are infected with WNV will show absolutely no symptoms whatsoever, and the disease often passes unnoticed. Fewer than 20 percent of people will have mild symptoms, some of which resemble a cold. Contrary to some rumors, you can't catch the disease from casual contact, such as touching or kissing an infected person.

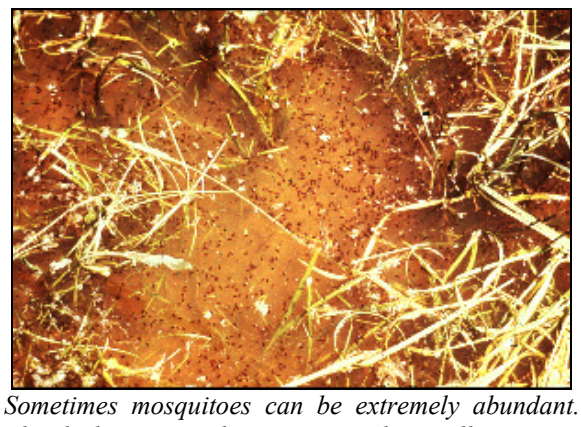


Aedes aegypti, a carrier of Dengue Fever. Photo courtesy of CDC.

Malaria is caused by any one of four species of one-celled parasites, called *Plasmodium*. The parasite is spread to people by the female *Anopheles* mosquito, which feeds on human blood. Although four species of malaria parasites can infect humans and cause illness, only malaria caused by the species *Plasmodium falciparum* is potentially life threatening. People get malaria from bites of an infected female mosquito. The mosquito injects young forms of the malaria parasite into the person's blood as it bites. The parasites travel through the person's bloodstream to the liver, where they grow to their next stage of development. In 6 to 9 days, the parasites leave the liver and enter the bloodstream again. They invade the red blood cells, finish growing, and begin to quickly multiply. The number of parasites increases until the red blood cells burst, releasing thousands of parasites into the person's bloodstream. The parasites attack other red blood cells, and the cycle of infection continues, causing the common signs and symptoms of malaria. The treatment for malaria depends on where a person is infected with the disease. Different areas of the world have malaria types that are resistant to certain medicines. A doctor must prescribe the correct drug for each type of malaria.

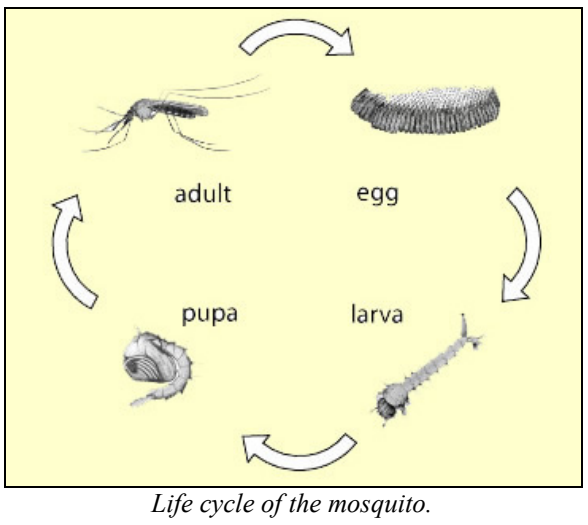
Reproduction

One female mosquito may lay 100 to 300 eggs at a time and may average 1,000 to 3,000 offspring during her lifetime. Mosquitoes breed in standing water, so eliminating standing water on your property reduces your risk. If a pond or riverbank dries up, their eggs can remain dormant for months or years until they again come into contact with water. It takes about two weeks after water is available for the adults to appear. Up to 100 mosquitoes can emerge per square foot of water surface per day in good breeding habitat. Mosquito larvae mature from egg to adulthood in about 4 to 7 days. The larvae spend most of their time feeding on algae, bacteria, and other microorganisms. They dive below the surface only when disturbed. Larvae swim either by jerky movements of the entire body or through propulsion with the mouth brushes.



Sometimes mosquitoes can be extremely abundant. The dark spots in this grassy pool are all mosquito larvae and pupae. Photo courtesy of CDC.

Larvae develop through 4 stages, or *instars*, after which they metamorphose into pupae. At the end of each instar, the larvae molt, shedding their exoskeleton, to allow for further growth. Mosquitoes' life behavior and adaptations have helped them survive in climates from the arctic to the equator. They have also developed means of locating indigenous blood-hosts in each locale: some mosquitoes prefer frogs, others mammals, still others birds.



Life cycle of the mosquito.

Habits

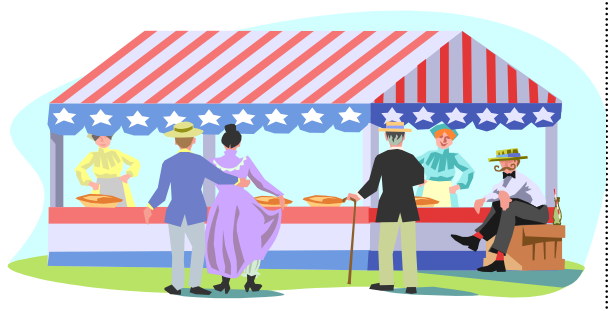
Mosquitoes are most active under low light conditions, yet some are "day biters." Winds above 10 miles per hour force mosquitoes to land and rest; when the winds die down, mosquitoes again become active. Avoid brushy, shaded sites, which have the low light and poor air movement that attracts mosquitoes. Temperatures below 50 degrees prevent mosquitoes from flying, but it usually takes three or four killing frosts to end the mosquito season. Once mosquito season has ended, they mate and the males die; however, many mosquito species live through the winter as adults. Only females spend the cold months hidden in protected places, such as hollow logs or animal burrows. In springtime, the newly awakened females are out in force, looking for blood. And once they've fed, the females lay their eggs and the cycle starts again.

Methods of Control

No product, including mosquito traps, foggers, pesticides, Citronella candles, smoking coils or DEET (common ingredient in most repellents), works equally well on every species of mosquito. The most popular backyard mosquito control methods are sprays & foggers – arguably the most ex-

Continued next page

Come visit us at the Marinette County Fair!



Visit the Education Tent at the Marinette County Fair August 27-30th at the Wausaukee Fairgrounds! The Education Tent is co-sponsored by the Marinette County UW-Extension, Land & Water Conservation, and the Parks Department. The Education Tent is located directly across from the main Exhibit Building and Fair Office. Explore the displays, pick up brochures or maps, and visit with department staff for questions or concerns you may have.

Returning this year is the "Herptile Habitat" display, featuring live reptiles and amphibians. Herptiles are crucial to the food web, and act as "biological indicators" to help determine the health of wetland habitats. Various species of snakes, turtles, frogs, and salamanders will be on display. Visitors will get a close-up look at these critters that help regulate pest populations, provide food for other animals, and add to the beauty and mystique of our Northwoods home.

If you have any questions about UW-Extension, Land & Water Conservation or the Parks Department, stop by the Education Tent, or contact UW-Extension at 715-732-7510; Land & Water Conservation at 715-732-7780; and Parks at 715-732-7530.

Northwoods Journal
Volume 7, Issue 3

The *Northwoods Journal* focuses on various outdoor recreation opportunities and local environmental topics to inform readers about natural resource use, management, and recreation in Marinette County.

Published in cooperation by:

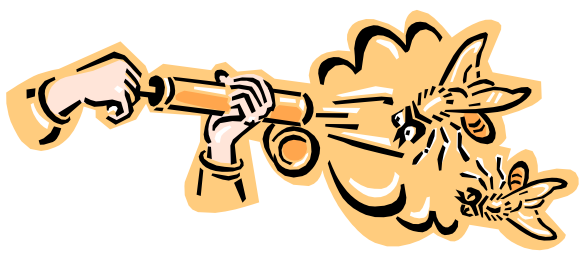
- Marinette County Land & Water Conservation Division
- Marinette County Parks & Outdoor Recreation Department
- University of Wisconsin-Extension

UW-Extension provides equal opportunities in employment and programming, including Title IX and ADA. To ensure equal access, please make requests for reasonable accommodations as soon as possible prior to the scheduled program. If you need this material in another format, please contact the UW-Extension office at 715-732-7510.

Please send comments to:
Marinette County Land & Water Conservation
1926 Hall Ave, Marinette, WI 54143
(715) 732-7780
awarren@marinettecounty.com

Mosquitoes, continued from page 6

pensive, ineffective and environmentally harmful thing to do! Sprays are effective for only 2 to 4 hours, and then the mosquitoes are back. Sprays kill nearly every backyard critter: ladybugs, butterflies, dragonflies, earthworms - everything! Worst of all, mosquitoes that survive come back stronger than ever - in as little as 6 generations (approximately two months under ideal conditions) mosquitoes can build up immunity to a pesticide. The best way to make pesticides effective is to minimize their use. Make them your last choice, not your first choice. Alternative pesticide-free sprays such as lemon eucalyptus sprays are available at most retailers. Also, quick online searches for 'natural mosquito repellent' turn up many good home remedies.



Citronella candles (an essential oil of citrus plants) and smoking coils (which contain pesticides) repel mosquitoes, but you have to stay in the smoky plume to be protected. If you have a pond near your house, you can grow plants such as cattails and bulrushes that attract dragonflies and other mosquito-eating insects, just be sure the plants are native, non-invasive species! To diminish mosquito populations, attract birds that eat insects while they fly – examples are tree and barn swallows. The eastern kingbird also catches flying insects. Many other insect-eating birds can help to control wasps and mosquitoes, including chickadees, house wrens, gray catbirds, bluebirds, vireos, warblers, orioles, and even some of the sparrows such as the chipping sparrow. Some seed-eating birds can also help control mosquitoes, since this is what they feed their young in the spring.

By maintaining a bird-friendly backyard, the birds you attract will help reduce insect problems, although they won't wipe them out completely. To attract birds, you need to meet their requirements for food, water, shelter, and space. The more variety of trees, flowers, and shrubs in your garden, the greater variety of birds you'll be able to attract. Insects will be drawn to native wildflowers and berry- or fruit- producing trees and shrubs, which in turn will attract many of the songbirds that eat insects as well as berries and fruit.

The easiest way of making your backyard less "mosquito-friendly" is to eliminate standing and stagnant water. This is an ideal

Discarded tires provide an ideal "incubator" for mosquito larvae. They are easily filled by rain and collect leaf litter. The dark color of tires makes them good heat absorbers which helps to speed up larval growth. Photo courtesy of CDC,

place for mosquitoes to reproduce! Fish ponds, swimming pools, bird baths, empty containers, old tires, tarps and clogged rain gutters are ideal places around your home for mosquitoes to breed and hatch their young. If stagnant water is left in a warm sunny area, this can actually expedite the mosquitoes' maturation time. All of these problems are very easy fixes! Clean your pool and birdbaths regularly, pick up the containers in your yard, take old tires to the landfill (Mar-Oco Landfill (715) 854-7530), and roll up your sleeves to clean out your gutters. With a bit of work, you can prevent mosquitoes from taking hold in your yard and home.

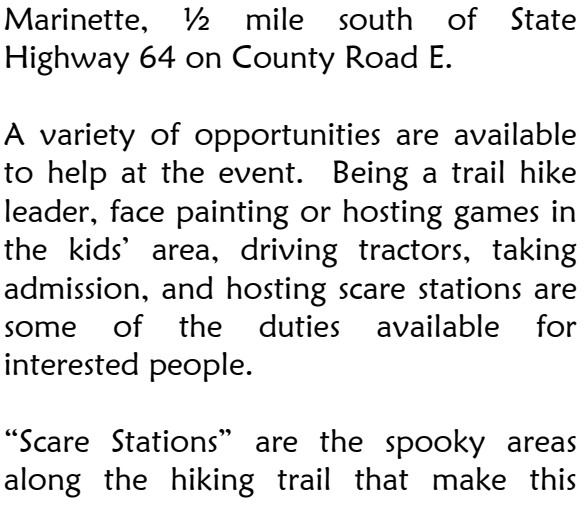
Information in this article was taken from the following sources:

- www.control-mosquitoes.com/
- www.mosquitoes.org
- www.mosquito-netting.com/predators.html
- http://en.wikipedia.org/wiki/Mosquito
- www.wildaboutgardening.org
- www.dhpe.org/infect/Malaria.html

For more sources of information about mosquito control, prevention and information, visit these sites:

- http://www.cdc.gov/ (U.S. Centers for Disease Control & Prevention)
- http://www.mosquito-pictures.com/
- http://animals.nationalgeographic.com/animals/bugs/mosquito.html
- http://www.mosquitomagnet.com/
- http://www.mosquitoinfo.info/

INTERESTED IN HELPING AT HAUNTED HARMONY 2009?



"Haunted Harmony" is a family-friendly Halloween-themed event sponsored by county employees, local volunteers and businesses. Its success is solely dependent upon donations and community involvement, and we are looking for interested folks to help out for this year. Haunted Harmony will be October 23-24th from 6:30-10:00 p.m. each night. This event takes place at the Harmony Arboretum & Demonstration Gardens, located 7 miles west of Marinette, ½ mile south of State Highway 64 on County Road E.

A variety of opportunities are available to help at the event. Being a trail hike leader, face painting or hosting games in the kids' area, driving tractors, taking admission, and hosting scare stations are some of the duties available for interested people.

"Scare Stations" are the spooky areas along the hiking trail that make this event so exciting! Individuals, families, and groups are welcome to participate, and the more scare stations we have, the better. If you love scaring people, and want to participate in a fun Halloween activity, this event is for you.

This is especially a great opportunity for students, scout groups, youth groups, and others looking for fun & interesting ways to fulfill community service hours.

Haunted Harmony is an exciting and beneficial event for the whole community - admission is non-perishable food items for local food pantries or items for the Menominee Animal Shelter.

For questions or for more information, please call 715-732-7780 or email *adirienzo@marinettecounty.com.*

Area Events Calendar

June-August **Bands at Badger Park**. Free musical entertainment, 6:30-8:30pm. All concerts held Wednesday evenings 6:30-8:30pm with concessions available at 5pm. Questions call Jenni at 715-938-0695.

June-August **Concerts in the Park**. Free concerts, Thursday evenings at the Great Lakes Memorial Marina Park in Menominee, MI. Contact the Marinette/Menominee Area Chamber of Commerce at (800) 236-6681.

June-August **Sunset Concert Series**. Free concerts Tuesday evenings on Stephenson Island in Marinette - contact the Marinette/Menominee Area Chamber of Commerce at (800) 236-6681.

June-August **Music & Movies in the Park**. Crivitz – Thursdays throughout the summer as scheduled. Visit www.crivitz.com for schedule and more information.

June 8-Aug. 13 **Supervised Playgrounds open for season** at Fred Carney Park, Duer Gym and Garfield Elementary school. Free supervised play including arts and crafts, games, sports Monday through Thursday from 9am-3pm rain or shine. Free breakfast and lunch provided by the School District of Marinette. Pre-register at the Civic Center, 2000 Alice Lane or on site at each facility. Call 732-5222 for more information

August 6-9 **27th Annual Menominee Waterfront Festival**. Food booths, entertainment, kids' stuff, a 5- and 10-k walk/run, a parade, fireworks and more fun for the whole family. Call Joe Plautz at (906) 863-2679 for more information.

August 8 **32nd Annual Silver Cliff Fire Dept & Rescue Auxiliary Fund Raising Picnic**. 11a.m.-6p.m. Parade, games, refreshments, face painting, raffle, DJ Music. Raffle at 6 PM, winners need not be present. Six prizes from $1,000 to $200. Tickets from $1 ea. or 6 for $5.

Aug. 10-14 **UW Marinette Gifted & Talented Academy**. 8:30am-2:30pm for grades 3-8. Call Continuing Education at 735-4342 for more information.

August 22 **Modified Garden Tractor Pull**. 2:00-5:00 p.m., Curve Inn Resort, N9464 Parkway Rd., Crivitz, WI 54114. Call 715-757-2021 or e-mail glenn@curveinnresort.com for information.

August 23 **VVHD Charity Golf Outing**. Little River Country Club, Marinette. Sponsored by Vandervest Harley-Davidson, 810 Frontage Road, Peshtigo. More information call 715-582-8843.

August 29 **Bike, Blues & BBQ** at Badger Park in Peshtigo. Sponsored by Vandervest Harley-Davidson, 810 Frontage Road, Peshtigo. More information call 715-582-8843.

August 27-30 **Marinette County Fair** at Marinette County Fairgrounds in Wausaukee. Visit the Education Tent sponsored by UWEX, LWCD, and other agencies. For commercial space and/or vendor questions, contact Carry at 715-938-1229. General information contact Lisa at 715-582-0622 or lwitak@cybrzn.com.

September 5 **Annual Kite Fly-in** 11:30am-2pm at Red Arrow Park, Marinette. Free kites, food & games. For more information call 735-7785.

September 8 **Fall Session for Tri-County Dog Training Academy**. Dog obedience classes, puppy class, beginners I and beginners II. Tuesday nights at the National Guard Armory, 2000 Mary Street, Marinette at 7pm. Program about one hour-no dogs first day. Classes are limited. Registration forms are available on web www.tcdta.org or call 715-735-8232

September 12 **Annual Peshtigo River Paddle**. 10:00 a.m.-3:00 p.m. See page 2 for more details.

September 12 **Fall Fest & Plant Sale** at Harmony Arboretum. 9:30a.m.-1:00 p.m. See box at right.

Wetland Installed at the Harmony Children's Learning Garden

Tony Juckem, driver; Darwin Brown; and Adrian Konell. Photo by Linda Warren, UWEX.

Volunteers and members of the Northern Lights Master Gardeners' Association installed the wetland habitat feature this month at the Children's Learning Garden at Harmony Arboretum & Demonstration Gardens. Thanks to a grant from the Wisconsin Natural Resources Foundation's C.D. Besadny Conservation Grant Program, this unique feature will educate visitors about wetlands, and their importance as a natural ecosystem. Other educational features will be added in the next several months.

The purpose of the Children's Garden is to provide local children the opportunity to explore and observe nature in a unique, exciting, and educational manner, and the experiential nature of the garden will encourage visitors to "get their hands dirty" while learning and having fun. Other partners involved with the CLG project include Marinette County UW-Extension and the Land & Water Conservation Division.

Harmony Arboretum Schedule of Events

Located 7 miles west of Marinette, ½ mile south of State Highway 64 on County E. *All programs are free unless otherwise stated.* For more information, call UWEX at 715-732-7510 or LWCD at 715-732-7780.

August 6: Prairie Walk, 6:30 – 8:00 p.m. Late summer is the time when prairie flowers bloom and grasses turn golden, and a wonderful time to spend an evening in the prairie! During the program, Marinette County staff will talk about what exactly a prairie is, why and how people restore prairies today, and how to identify different kinds of prairie plants.

August 8: Plant Pest Clinic, 8:30 a.m. to noon – What's eating at your garden? Or causing fuzzy or slimy leaves or fruit? Bring your pest samples and have them accurately identified and get management tips on how to combat them now and in the future.

August 20: Cooking with Herbs, 6:00 - 8:00 p.m. – Join UWEX staff and Master Gardeners to explore growing and cooking with herbs. Find out how to mix herbs to create a salt substitute; learn the best storage methods, and taste many examples of culinary herbs in delicious, easy-to-make recipes *($2.00 charge to cover handout materials).*

September 12: Fall Fest & Plant Sale, 9:30 a.m. to 1:00 p.m. Join Northern Lights Master Gardener Members for this fun event. There will be fruit tasting (early apples, plums, pears), crafts to make, and the annual fall plant sale. Details of the craft projects available will be on-line by August 1st. For more information, go to www.uwex.edu/ces/cty/marinette or call toll free 877-884-4408.

Area Farmers' Markets

Marinette Farmers' Market. Tuesday, Friday, and Saturday mornings at Main Street Market, Merchants Park, corner of Main & Wells Streets.

Menominee Downtown Farmer's Market. Marina bandshell, thru Sept. 31. Saturday market from 9-11am and Thursday market starts from 3-7pm.

Crivitz Flea & Farmers' Market. Thursday mornings in the Crivitz Town Hall parking lot.

Crivitz Farmer's Market - Green Thumb Garden Shoppe. July 11-Oct.10, Saturdays only. Corner of County Hwy A and Mira Ave in Crivitz.

Amberg Flea & Farmers' Market. Occasional Saturdays, at Amberg Antiques & Sweets, Highway 141. More information & schedule, 715-759-5343.

Amberg Farmer's Market. Saturdays from May through October. Downtown Amberg.